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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/613,399

Applicant(s)

PUTTERMAN ET AL.

Examiner

Bennett Ingvaldstad

Art Unit

2427

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 January 2009 has been entered.

Response to Arguments

2. Applicant argues that the Hayashi reference in view of the Sparrell reference does not teach using designated states to resolve resource conflicts. Remarks at 15-17. However, Sparrell teaches that a tuner in a state of streaming to a television device may be reallocated if the television is turned off. Sparrell para [0109]. The state of streaming to a television device is a "maybe free" state as claimed because the media server has no way of knowing when any particular TV is on or off (Sparrell para [0077]), so the tuner may or may not be in use by a user. Thus by using a designated state of streaming to a television to reallocate a tuner as described in para [0109], the PVR system resolves the conflict between the tuner request and the fact that all tuners are already reserved.

3. Therefore, Applicant's arguments are unpersuasive, and the rejections are upheld.

4. Please note that the Willame reference has been removed from the rejections of claims 5, 6, 8, 13, 14, and 16 because Hayashi in view of Sparrell already teaches all of the claimed subject matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 5, 6, 8-10, 13, 14, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407).

Regarding claim 1, Hayashi discloses a method for networking a plurality of clients in a personal video recording ("PVR") system, said method comprising the steps of:

receiving a plurality of television signals (digital satellite broadcast [col. 6, 64-67]);

tuning each of said television signals in one of a plurality of tuners (multiple tuners [col. 8, 36-44]);

buffering said television signals on a storage medium in at least one PVR media server (the data is buffered so it can be re-transmitted to the clients [col. 8, 4-12]);

coupling a plurality of clients, over a network, to said PVR media server (wireless client devices coupled to wireless server [col. 7, 9-14]);

receiving at least one request from each of at least two clients for at least one service in said PVR system (each client can generate requests [col. 7, 8-14] [col. 11 30-42]); and

allocating resources of said PVR system to said clients, as appropriate, to deliver said service to said clients (data is transmitted to clients [col. 7, 1-8]).

Hayashi does not further disclose designating the at least three states to a tuner as claimed.

Sparrell discloses in an analogous art a method for networking a plurality of clients in a personal video recording ("PVR") system comprising the steps of:

designating one of at least three states to a first tuner, the at least three states comprising at least: a busy state (a tuner may be designated to record a program – see Fig. 3, paras [0064-0066] – so it is "busy" during recording), a maybe free state (a tuner may be reserved for streaming to a television - Fig. 4 - but the media server does not know whether the television is on or off - para [0077] - so the tuner is "maybe free" – see para [0109]-[0112] for a determination of whether the tuner is free or not), and a totally free state (an available resource [0064]),

wherein the designating of the states is used by the PVR system for resolving conflicts in allocating tuners to the requesting clients (para [0109] – tuner reallocation based on determining whether a tuner is being used),

the resources of the PVR system comprising the tuners,
the first tuner comprising a first designated state [0064, 0077].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multi-tuner PVR system disclosed by Hayashi with the teaching of Sparrell's multi-tuner PVR system for the purpose of allowing a user to re-allocate network resources which may be unused (Sparrell [0077]).

Independent claims 9 and 17 correspond to claim 1 and are met as such, Hayashi in view of Sparrell further disclosing a PVR media server (Sparrell's media server 14, Fig 1) and system (Sparrell Fig 1) for implementing the above method.

Regarding claims 2 and 10, depending on claims 1 and 9, Hayashi further discloses wherein:

the step of receiving at least one request comprises the step of receiving a request to record a television program (record request [col. 11, 7-16]); and

the step of allocating resources of said PVR system to said clients comprises the steps of:

assigning a tuner to record said television program (activating tuner [col. 11, 7-16]);

allocating space on said storage medium to record said television program (space is allocated in order to record the program on the hard disc drive [col. 11, 7-16]); and

storing said television signal on said storage medium during a time scheduled for said television program (recording the program on the hard disc drive [col. 11, 7-16]).

Regarding claims 5 and 13, depending on claims 1 and 9, Hayashi in view of Sparrell further discloses:

wherein the step of allocating resources of said PVR system to said clients comprises the step of resolving any conflicts of assigning resources to said clients (Sparrell paras [0109]-[0112]).

Regarding claims 6 and 14, depending on claims 5 and 13, Hayashi in view of Sparrell further discloses wherein:

the step of receiving at least one request comprises the step of receiving a request to watch buffered live television at a channel selected (Hayashi [col. 10, 43-45]); and

the step of resolving any conflicts of assigning resources comprises the steps of: determining whether one of said tuners is available to receive said television signal (determining if all tuners are in use – Sparrell para [0109]);

if so,

assigning said tuner to receive said television signal at said channel selected (assigning the available resource – Sparrell para [0064]);

if not,
determining which tuners are potentially available (Sparrell paras [0110]-[0112]);

querying clients assigned to said tuners potentially available to determine whether said clients desire to change a current channel of said tuner to said channel selected (Sparrell para [0110]); and

assigning a tuner potentially available to receive a television signal at said channel selected if no clients cancel a change of said current channel (Sparrell para [0110])

Regarding claims 8 and 16, depending on claims 5 and 13, Hayashi in view of Sparrell further discloses the steps of:

designating a totally free tuner state to a tuner not assigned to a client (determining that a tuner is an available resource [Sparrell 0064]);

designating a maybe free tuner state to a tuner assigned to a client but not currently executing a scheduled recordation (a client not recording a program may or may not be in use [Sparrell 0077]); and

designating a busy tuner state to a tuner currently executing a scheduled recordation (a tuner reserved to record a program [0064-0066] is “busy” during recording).

18. Hayashi in view of Sparrell further teaches the system of claim 17, further configured for resolving conflicts of assigning resources to the clients [Sparrell 0055],

the busy state for indicating that the server is currently receiving a program by using the first tuner (a tuner receiving a program for recording [0064-0066] is "busy" during recording);

the maybe free state for indicating a probability that a client is viewing a program by using the first tuner, wherein when a tuner is designated as in the maybe free state a user selects to view a program at a client and the PVR system is missing information as to whether the user is still viewing the program (the resource manager doesn't know whether the TV is on or off, i.e. being viewed or not [Sparrell 0077]); and

the totally free state for indicating when a tuner is not allocated by a scheduler and a client is not viewing programming by using the tuner (determining that a tuner is an available resource [Sparrell 0064]); wherein:

the input is further for receiving one or more of:

a request to watch buffered live television at a channel selected [Hayashi col. 6, l. 57-63], and

a request to record a television program (record request [Hayashi col. 11, 7-16]);

the PVR media server is further for determining whether one of the tuners is available to receive the television signal [Sparrell 0064];

if so, for assigning a first tuner to receive the television signal at the channel selected (assigning an available resource [Sparrell 0064-0066]); if not, for determining which tuners are potentially available [Sparrell 0077], for querying clients assigned to the tuners potentially available to determine whether the clients desire to change a current channel of the tuner to the channel selected (Sparrell Fig. 11 and description), and for assigning a tuner potentially available to receive a television signal at the channel selected if no clients cancel a change of the current channel and if no clients cancel recordation of the television program ("stealing" a tuner - Sparrell [0077], [0109], [0110]).

19. Hayashi in view of Sparrell further discloses the system of claim 17, further comprising a new device coupled to the network (a new device may be automatically discovered [Sparrell Abstract], and a set of compatible devices on the network include one or more PVR-media servers configured for storing pre-recorded video and for providing live television (server [Hayashi Abstract], central resource manager [Sparrell Abstract]),

wherein a first PVR-media server on the network exposes an interface to allow the new device to aggregate programming provided by the PVR-media server in response to the request (the new device is added to a graphics pipeline [Sparrell 0079]), the new device connects to a compatible device via a supporting

protocol, and the compatible device translates the protocol for the appropriate device using state information (the compatible resource manager uses a known discovery protocol to communicate with the new device [Sparrell 0094]).

Hayashi in view of Sparrell does not further explicitly disclose that the new device transmits a discovery command during the discovery process. However, this would have been obvious to try due to the inherently finite number of devices that could have transmitted the discovery command to initiate the discovery process; that is, either the new device or one of the existing network devices would have transmitted the discovery command, so the choice of the new device to transmit the discovery command was a design choice obvious to one of skill in the art.

20. Hayashi in view of Sparrell further discloses the system of claim 19, wherein the new device comprises a television (a new network device is added [Sparrell 0079], and network devices may be televisions [Sparrell 0019]), and the compatible device supports an industry standard protocol, wherein the industry standard protocol is selected to communicate to the compatible device and to use the services provided by the compatible device [Sparrell 0094].

7. Claims 3 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407) and Ellis (US 2007/0199030).

Regarding claims 3 and 11, depending on claims 1 and 9, Hayashi further discloses wherein:

the step of receiving at least one request comprises the step of receiving a request to watch buffered live television (request to reproduce a program [Hayashi col. 11, 17-22]); and

the step of allocating resources of said PVR system comprises the steps of:
assigning a tuner to said client (a tuner is assigned to a client by activating the tuner to record the program requested by the client [Hayashi col. 11, 7-16]);

transferring said television signal to said client, so as to deliver said television signal (broadcast signal is reproduced and transmitted to client [Hayashi col. 11, 17-30])

Hayashi in view of Sparrell does not further disclose:

generating a buffer position to identify a location within said television signal for playback of said television signal at a client; and

transferring said television to said client, so as to deliver said television signal using said buffer position

Ellis discloses in an analogous art a method for networking a plurality of clients in a personal video recording ("PVR") system wherein the step of allocating resources of said PVR system comprises the steps of:

generating a buffer position to identify a location within said television signal for playback of said television signal at a client (media server assigns a pointer for each user's current viewing position [0093]); and

transferring said television to said client, so as to deliver said television signal using said buffer position (users play back recorded programs from the media server [Abstract] using buffer positions as described in [0093])

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method with the teaching of Ellis for the purpose of allowing multiple users to simultaneously view a single program at different time positions in the program [Ellis 0093])

8. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407) and Ansari (US 2004/0221302).

Regarding claims 4 and 12, depending on claims 1 and 9, Hayashi further discloses wherein:

the step of receiving at least one request comprises the step of receiving a request to receive television signals from a [] television service provider

(programs are transmitted to the client in response to control signals from the user [col. 9, 25-31] e.g. requests to change channel [col. 10, 44-45]); and

the step of allocating resources of said PVR system comprises the steps of:
identifying one or more tuners coupled to receive television signals from said television service provider (the user supplies a requested channel or program [col. 10, 43-45] and the server selects a tuner to provide the signal which implies an identification); and

assigning a tuner from said tuners to receive television signals from said television service provider (the requested signal is transmitted to the user [col. 9, 25-31])

Hayashi in view of Sparrell does not further disclose wherein the step of receiving at least one request comprises the step of receiving a request to receive television signals from a specific television service provider, as disclosed by applicant.

Ansari discloses in an analogous art a multi-tuner television reception system that receives signals from multiple television service providers (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multi-tuner PVR system with the teaching of Ansari's multi-tuner system for the purpose of receiving different programs from multiple service providers (Ansari [0007], [0013]), thereby rendering obvious the step of receiving a request to receive television signals from a specific television service provider.

9. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407) and Willame (US 2006/0179462).

Regarding claims 7 and 15, depending on claims 5 and 13, Hayashi in view of Sparrell does not further disclose canceling a recordation in the claimed manner.

Willame teaches a conflict resolution method in a multi-tuner PVR system wherein:

the step of receiving at least one request comprises the step of receiving a request to record a television program (programs can be preset for recording [Hayashi col. 11, 7-16]); and

the step of resolving any conflicts of assigning resources comprises the steps of: determining whether one of said tuners is available to receive said television signal (determining whether a conflict between programs identified for recording exists [Willame 0089]); if so,

assigning said tuner to receive said television signal (tuning different channels [Willame 0051] i.e. when no conflict exists);

if not,

determining which tuners are potentially available (this determination is made in order to suggest changes to resolve the conflict [Willame 0092]);

querying clients assigned to said tuners potentially available to determine whether said clients desire to cancel recordation of said television program (the

conflict resolution screen [Fig. 7] allows the user to cancel recordation [Willame 0092]); and

assigning a tuner potentially available to receive said television signal if no clients cancel recordation of said television program (if the resolution screen is left "as is" the channel will change [Willame 0092]).

It would have been obvious to add the recording cancellation method of Willame to the method of Hayashi in view of Sparrell for the purpose of expanding the options for resolving tuner conflicts.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407) and "Automatic Windows 98/ME TCP/IP Addressing Without a DHCP Server" (hereinafter "APIPA").

Claim 21: Hayashi in view of Sparrell does not further disclose the network address assigning method, nor the new device announcement method.

However, APIPA teaches the address assigning method for automatically choosing an address when a DHCP server is not found (see Example 1).

APIPA further teaches a network announcement ("discover" message, Example 1) that is broadcast over the network. The claim requires either a broadcast or a multicast, so the APIPA reference further meets the announcement limitations because it uses a broadcast.

APIPA further teaches that, in response to the announcement, the new device “constructs state information that provides details regarding devices available on the network” (e.g., whether the DHCP device is available), “the state information comprising protocols and services supported by the networked devices” (e.g., TCP/IP), “such that when compatible devices on the network receive the announcement command, the compatible devices add information encapsulated in the announcement command, to a local cache” (when a DHCP device is found, it establishes a lease).

It would have been obvious to have integrated the DHCP addressing methods disclosed by APIPA into the network system, for the purpose of automatically assigning network addresses to a new device using a DHCP server, but still allowing the new devices to receive an address if the DHCP server cannot be reached.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bennett Ingvaldstad whose telephone number is (571)270-3431. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bennett Ingvaldstad/
Examiner, Art Unit 2427

/Scott Beliveau/
Supervisory Patent Examiner, Art Unit 2427